

## POISONING HERE UNCOVERED BUG OF BOTULINUS

Botulism comes from the soil and is not the result of the method of canning olives or other vegetables.

This scientific discovery was given to the world by the man who made the discovery—Dr. J. G. Geiger, surgeon United States health service, speaking at the convention of health officers at the Hotel Portland. Furthermore, it was an outbreak in Klamath Falls, Or., which supplied the missing link in the investigation as to the cause of deaths from eating olives. Dr. Geiger explained that the investigation was carried on by Dr. E. C. Dickson of Stanford university, Dr. K. F. Meyer of the University of California and himself, representing the United States surgeon-general's office, but Dr. Lawrence Selling of Portland, who was in attendance at the convention informed the assembled health officers that Dr. Geiger was the scientist who had tracked the germ to the soil.

### Olives Have Clean Bill

When a number of deaths occurred in various parts of the country from eating California olives, the national canners' association raised \$50,000 to finance an investigation to discover what was wrong; whether the fault was in the process of preserving the olives or whether something was wrong with the food. Drs. Dickson, Meyer and Geiger were selected to carry on the work and have pinned down one concrete fact—the source of the fatalities is in the earth. The olives have been given a clean bill of health insofar as they are concerned, but the public has become scared of olives and a \$30,000,000 industry in California has been ruined.

Bacillus botulinus, explained Dr. Geiger, is widespread in nature and the investigators have scarcely started on the subject. The spores have been found on vegetables, fruit, meat and fish. Where the investigators have been able to follow up outbreaks they have found that the in-

fect food came from gardens or orchards where manure was used for fertilization.

### Cook Well, Is Advice

To play safe against this deadly bug, sterilization is the only protection. Take canned food and cook it for at least 10 minutes before eating, advised Dr. Geiger, and always throw away spoiled food.

Commercial canners, under suggestions of the commission, are now able to rid their products of the danger, but the home-canning industry, particularly in California, said the scientist, is in a bad way. The bug has been able to resist 230 degrees of heat for 30 minutes and boiling for four hours, recounted Dr. Geiger, to show botulinus bacillus are extremely hardy. Now canners subject the food to 240 degrees for 40 minutes under pressure, which makes the product safe. This, pointed out the investigator, is more than the home canner can do, for the home-canner does not have the equipment for terrific temperature under pressure to bring about thorough sterilization. Salmon canners, he said, will come to a realization that an enormous cook will be necessary, but 240 degrees for 90 minutes will clear salmon of botulinus.

### Alcohol Is No Help

Even alcohol, unless a very high percentage, does not feast botulinus. Dr. Geiger told of a man on a California farm who tossed all the stale fruit on the place into a barrel, threw in some yeast, discovered the result had a "kick" and organized a poker party. Twelve men who participated and drank the stuff died. The spores have been found on grapes, but thus far the investigation has not disclosed the sport in wine; something in the process of fermentation may destroy them, but Dr. Geiger is not prepared to discuss this matter with authority yet.

Responding to a question by Dr. Andrew C. Smith, Dr. Geiger said that oil made from infected olives carry the bugs; that the olive oil appears to be a good carrier.

### 163 Cases In South

There have been 163 known cases of botulism in California. Regarding the olives which started the investigation, they came from two yards, one at Oroville and the other at Lindsey, two of the best yards in the state. Bacillus botulinus was found in the dust on the olives. Cases have been traced to the public market in San Francisco and nearby towns and cases developed at Saratoga, Cal.

Klamath Falls, Or., supplied the final clue, where a complete history and investigation was possible. For a number of years beans had been grown by a woman in her garden and home-canned by the cold pack process. Last winter the woman opened a can of beans; they did not smell wholesome and she threw them out to the chickens. Next morning all were dead save one, which had "limberneck." Dr. Geiger appeared on the scene. He found that the beans had been canned in the same manner as in previous years, but that the garden for this particular crop had

## The Fortune Teller



been fertilized with manure. The investigator got some of the beans, the chickens and dug up some beanstalks and soil and carried them away. The analysis disclosed that bacillus botulinus was in the soil.

Note—The hens who succumbed to the effects of the bean feed referred to, were owned by Mrs. Swan Johnson of this city. Dr. Geiger came here last spring and remained for three or four days investigating the case. At that time he announced that he was satisfied the botulinus bacillus was bred in the soil, and was quoted to that effect in local papers and over the Associated Press circuit.

## Cattle Tick Is Wiped Out In Many States

WASHINGTON, Dec. 23.—The cattle tick is fast being eliminated through the work of the department of agriculture and the co-operation of the states. Of the 15 states which were tick-infested when the work of eradication systematically began on July 1, 1906, six of them have been completely freed of the pest. These states are California, Kentucky, Mississippi, Missouri, South Carolina and Tennessee.

During the year ending Dec. 1, 1920 more than 50,000 square miles were freed of ticks and since the work began in 1906, the area released has been 510,991 square miles. That is 70 per cent of the 728,565 square miles infested with the tick when the eradication campaign began. The area remaining to be cleared comprises 218,474 square miles, all of which is in the southern states.

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## WILL DESTROY BIRD ENEMIES OF QUAIL

HOLLISTER, Cal., Dec. 23.—San Benito county hunters are preparing for a big jay shoot to be held during the second week of January as a means of protecting the quail in this section. The blue jay, according to reports to game officials, is fond of quail eggs and is an enemy of the young quails.

Two teams each containing more than 30 men will spend the week in the shoot. The team bringing in the largest number of birds will be the guests of the lesser at a banquet.

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## HOT WATER FOR SICK HEADACHES

Tells Why Everyone Should Drink Hot Water With Phosphate In It Before Breakfast

Headaches are caused by auto-intoxication—which means self-poisoning. Liver and bowel poisons called toxins, sucked into the blood excite the heart which pumps the blood so fast that it congests in the smaller arteries and veins of the head, producing violent, throbbing pain and distress, called headache. You become nervous, despondent, sick, feverish and miserable, your meals sour and almost nauseate you. Then you resort to acetanilid, aspirin or the bromides, which temporarily relieve but do not rid the blood of these irritating toxins.

A glass of hot water with a teaspoonful of limestone phosphate in it, drunk before breakfast will not only wash these poisons from your system and cure you of headache, but will cleanse, purify and freshen the alimentary canal.

Ask your pharmacist for a quarter pound of limestone phosphate. It is inexpensive, harmless as sugar.

If you aren't feeling your best, if tongue is coated or you wake up with bad taste, foul breath or have colds, indigestion, biliousness, constipation or sour, acid stomach, begin the phosphated hot water cure to rid your system of toxins and poisons.—Adv.

## Horse Saves 1000 Children



BERKELEY, Calif., Dec. 23.—"Alice," a plain sorrel mare, owned by Miss Margaret Williams, has saved 1,000 children's lives in the last few years. Every 35 days two gallons of blood are taken from the horse and made into diphtheria serum at a laboratory here. The horse is carefully fed and watched at all times.

## Christmas Photographs

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